

XVIII.—*A further Contribution to the Ornithology of Guatemala.* By OSBERT SALVIN, M.A., F.L.S., &c.

As a number of species of Birds were obtained by Mr. Godman and myself during our visit to Guatemala which are not included in the papers on the ornithology of that country, published by Mr. Sclater and myself in the earlier volumes of this Journal, I now propose to give a list of these additions; and at the same time I take the opportunity of bringing into the same uniform plan all the species incidentally mentioned by me in other papers referring to the ornithology of Guatemala (Ibis, 1864, p. 372, and 1865, p. 187). I also append a series of corrections to former lists, both of nomenclature and distribution, which further observations have brought to light.

I am now acquainted with 612 species of birds that inhabit the country included within the limits prescribed in our first paper. Of these, all but about 21 have come under our personal notice, either from our own observations or from having been procured for us by collectors sent to obtain specimens from particular localities. Our own observations have extended over the greater portion of the country. A small collection was made at Belize, and on each occasion at Yzabal, twice by myself alone, and twice in company with Mr. Godman. I have traversed the road to Guatemala four times, and each time collected a few specimens. I by myself, as well as with Mr. Godman, made considerable collections at Dueñas in the uplands of Guatemala, where very large additions were amassed for us by Mr. Wyld and his family while we were away in other parts. These include a large number from the Volcan de Fuego and the upper section of the Pacific coast-region, both of which are easily reached from Dueñas. We both, on separate occasions, collected at Escuintla. After Mr. Godman left, I passed through the Altos, starting from Vera Paz, staying at Totonicapam, Quezaltenango, and other places, and also made two expeditions to the Costa Grande, staying, during the first, at Retaluleu. The second I devoted to the lagoons of the coast, and the series of small lakes at Huamuchal, close to the frontiers of Soconusco. I also obtained a few specimens from San José, the Pacific roadstead

of Guatemala, and also further to the southward, from the road to the mines of Alotepeque and the ruins of Copan.

In Vera Paz, during my second visit to Guatemala, through the cordial help of Mr. Robert Owen, I obtained a collection from San Gerónimo, and also another during two visits to Coban. With Mr. Godman I explored some of the mountains of Santa Cruz, especially the neighbourhood of Chilasco, and again visited Coban. We then descended to the lowlands of Choctum, and I afterwards went by way of Cahabon to Peten, and thence, descending the Belize river, visited the Cays of the Belize coast, returning to Guatemala by way of Yzabal. Both of us also, on separate occasions, passed down the Polochic river into the lake of Yzabal. So much for our own explorations. I have mentioned the great help rendered by Mr. Wyld and his family, who, by employing Indian hunters of Dueñas, obtained for us some very valuable additions. Mr. R. Owen also, and Mr. Hague of San Gerónimo, aided us very materially in Vera Paz. From Don Vicente Constancia we procured a considerable number of skins, partly collected in the vicinity of the Antigua, and partly from Vera Paz. Don Carlos Meany, of Guatemala, also furnished us with a few specimens. The greater part of our collections from Choctum and the *tierra caliente* north of Coban, in Vera Paz, were formed by Cipriano Prado, an excellent collector, who, with the aid of Indian shooters, thoroughly exhausted that district of novelty. His brother, Juan Prado, also made a good collection, chiefly of Raptores, in Coban; and Felipe Sierra, also an energetic collector, furnished a good contribution from the valley of the Polochic. Collections were also obtained from Cahabon and Tactic. On the Pacific coast, Enrique Arcé, who is now so successfully exploring Veragua and Costa Rica, made a collection in the vicinity of Retaluleu and Champerico. A few additional species were also most kindly given me by Dr. Bernouli of Masatenango, who had formed a small collection. These, with some occasional specimens obtained from various quarters, comprise the principal sources from which our collection has been amassed.

The parts least explored, and which therefore present the greatest chance of additional discoveries, are the Altos north of

Quezaltenango (where *Parus*, *Sitta*, and other Mexican high-land forms are yet to be found), Yucatan (where I feel sure much remains to be done, especially amongst the savannas of that peculiar district), and southward along our southern boundary, which, it will be remembered, was the line of the proposed Honduras Railway. This line I now believe to be perfectly arbitrary, as I have little doubt that the Guatemalan fauna really extends as far south as the Rio San Juan and the southern border of the lake of Nicaragua. Passing south of this, we come at once upon the clearly defined and peculiar fauna of Costa Rica. But more on this subject on another occasion, as space will not allow me now to enter critically upon the distribution of ornithic life throughout the isthmus.

1. *CATHARUS FRANTZII* (Cab.): Baird, Rev. Am. Birds, part i. p. 9.

In November 1861 we obtained a single specimen of this species at Dueñas. It agrees with other specimens in our collection from Costa Rica, where it was first discovered by Dr. von Frantzius.

1867 2. *CINCLUS MEXICANUS*, Sw.?

120 A pair of Dippers once only came under my notice. They were seen on the rocks of a mountain-torrent above Totonicapam, at an elevation of about 10,000 feet above the sea. I shot one, but the stream swept it away before I could reach it.

3. *PSALTRIPARUS MELANOTIS*, Hartl.

Originally described from Guatemalan specimens. On more than one occasion I observed what I believe to be this species, in the pine-woods of the mountains near Solola and above the lake of Atitlan.

4. *POLIOPTILA SUPERCILIARIS*, Lawr.

A single male specimen of this *Polioptila* was brought to us from Chisec.

5. *CERTHIA MEXICANA*, Gloger: Baird, Rev. Am. Birds, part i. p. 90.

The Mexican Tree-creeper is by no means uncommon in the pine-forests of the upper zone of the Volcan de Fuego. We also

observed it frequenting pine trees in the district of Chilasco, Vera Paz, at about 6000 feet above the sea.

6. *CAMPYLORHYNCHUS RUFINUCHA*, Lafr. : Baird, Rev. Am. Birds, part i. p. 105.

Prof. Baird (*l. c.*) has pointed out differences between this species and *C. capistratus* of Lesson, which specimens in our collection, in a measure, confirm. Specimens from the Pacific side of the watershed agree with *C. capistratus*, while a single specimen from the valley of the Motagua (Chuacus) differs from these as regards the coloration of the upper plumage; the tail also is rather longer, in both these respects agreeing with Prof. Baird's description of *C. rufinucha*. The tarsi, however, are equal in all our specimens, and the quadrate spots on the outer rectrices (except the outermost) are absent. As the areas inhabited by these very closely allied species are distinct, in Guatemala at least, I prefer to leave them as Prof. Baird has placed them.

7. *THRYOTHORUS ALBINUCHA* (Cabot): *T. petenicus*, Salv. P. Z. S. 1863, p. 187 ; Baird, Rev. Am. Birds, part i. pp. 125, 149.

Prof. Baird has kindly compared our type specimen of *T. petenicus* with that of *Troglodytes albinucha*, Cabot ; and the result of his observations will be found as above quoted. There seems little doubt that the species are identical. Our specimen was shot near the village of Sakluk, in the district of Peten.

8. *DENDRÆCA OCCIDENTALIS* (TOWNS.): *D. niveiventris*, Salv. P. Z. S. 1863, p. 187, pl. 24. fig. 2. *D. occidentalis*, Scl. Ibis, 1865, p. 89. ✓

The error I fell into in redescribing this bird has been fully explained in the last mentioned paper by Mr. Sclater, who also had some sins to account for. The bird occurs in most of the elevated districts where pines abound. We obtained specimens in the Volcan de Fuego, in the hills above the plain of Salama, and near the mines of Alotepeque.

9. *DENDRÆCA OLIVACEA* (Giraud) : Baird, Rev. Am. Birds, part i. p. 205. ✓

Prof. Baird, in his 'Review,' mentions a specimen received from us as marked "Choctum, Vera Paz, Jan. 1862." This is certainly an error as regards locality, as we never obtained this species except in the higher districts. It is common in the upper pine-forests of the Volcan de Fuego, and also in the district of Chilasco in Vera Paz.

10. *DENDRÆCA VIEILLOTI*, Cassin: Baird, Rev. Am. Birds, part i. p. 203.

✓ Occurs on the Cays of the Belize coast. (See Ibis 1864, p. 280.)
We also possess specimens from Costa Rica.

11. *BASILEUTERUS RUFIFRONS*, Sw.

A single specimen from Dueñas having the lower belly whitish, and not yellow as is the case with all our specimens of *B. delatarii*, Bp. I place it under the above name.

12. *CARDELLINA VERSICOLOR*, Salv. P. Z. S. 1863, p. 188, pl. 24. fig. 1.

This beautiful species is only found in the highest districts, such as the Volcan de Fuego, Totonicapam, and Chilasco.

13. *CARDELLINA RUBRIFRONS* (Giraud): Baird, Rev. Am. Birds, part i. p. 264.

Volcan de Fuego and Totonicapam.

14. *PETROCHELIDON ALBILINEA*, Lawr.: *P. littorea*, Salv. P. Z. S. 1863, p. 189; Baird, Rev. Am. Birds, part i. p. 300.

A common species on both Atlantic and Pacific coasts of Guatemala, and southward to Panama. It is also to be seen frequenting rivers, though never ascending into the interior.

15. *PETROCHELIDON SWAINSONI*, Scl.: Baird, Rev. Am. Birds, part i. p. 290.

Dueñas.

16. *COTYLE RIPARIA* (Linn.): Baird, Rev. Am. Birds, part i. p. 319.

We obtained several specimens of this species at Dueñas in September 1861, having previously observed it about the lake of Yzabal.

17. *VIREO OCHRACEUS*, Salv. P. Z. S. 1863, p. 188.

San José de Guatemala, on the Pacific coast.

18. *VIREO SEMIFLAVUS*, Salv. P. Z. S. 1863, p. 188.

Peten.

19. *VIREO PALLENS*, Salv. P. Z. S. 1863, p. 188.

From the harbour of Realejo. The types of these three species have been examined by Prof. Baird, and will be mentioned in a monograph of the genus shortly to appear.

20. *RHAMPHOCELUS UROPYGIALIS*, Bp. : Scl. Cat. p. 79.

Is said to come from Guatemala. We never met with it.

21. *CARDINALIS VIRGINIANUS* (L.) ?

I saw Cardinal-Grosbeaks at Belize, but did not obtain specimens.

22. *PHONIPARA PUSILLA*, Sw.

Peten. It is also found as far south as Panama.

23. *SPIZELLA PINETORUM*, Salv. P. Z. S. 1863, p. 189.

From the open savannas, called pine-ridges, of Poctum, in the southern border of the district of Peten. I found several birds feeding together amongst the grass.

24. *JUNCO ALTICOLA*, Salv. P. Z. S. 1863, p. 189.

Common in the upper zones of the volcanoes of Agua and Fuego, as well as in the Altos of Guatemala, at an altitude of about 8000 feet. Quezaltenango, Totonicapam.

25. *AMMODROMUS PETENICUS*, Salv. P. Z. S. 1863, p. 189.

Obtained in the open savannas of the district of Peten.

26. *PIPILO OREGONUS*, Bell.

A common species in the Altos, frequenting brushwood. Quezaltenango, Solola, Chimaltenango, &c.

27. *LOXIA MEXICANA* (Strickl.) ?

On descending the *cuesta* of Chuacus, in September 1861, we both watched several Crossbills for some time, and I have little doubt they were of this species; but our guns being with the servants, we failed to secure specimens, as they were gone before our men joined us.

28. *CHRYSOMITRIS ATRICEPS*, Salv. P. Z. S. 1863, p. 190.
Quezaltenango. Found feeding on thistles.

182 29. *SYCALIS CHRYSOPS*, Sclater, P.Z. S. 1861, p. 376.
445 One immature specimen only, found with another feeding on some seeds near the border of the lake of Dueñas.

30. *QUISCALUS MAJOR*, Vieillot.

The Crow Blackbirds frequenting the Cays of the Belize coast seem to belong to this species rather than to *Q. macrurus*, Sw., which is the common bird of the interior of Guatemala.

31. *DOLICHONYX ORYZIVORA* (Linn.).

I only met with this widely spread species in a single locality, one of the Cays of Lighthouse Reef on the Belize coast.

32. *CYANOCITTA UNICOLOR*, DuBus : Scl. Cat. p. 143.

This fine Jay is common in the district of Chilasco in Vera Paz, and also in the fir-forests above Totonicapam and Quiché. They are usually met with in small flocks of five or six. This species has hitherto only been recorded from Mexico.

33. *ELAINEA*, sp.

We possess a single specimen of an *Elainea* obtained near Dueñas, which agrees very nearly with an undescribed species in Mr. Sclater's collection.

34. *ONCOSTOMA CINEREIGULARE*, Scl.

A common species at Coban, and accidentally omitted from former lists.

35. *TROGON AURANTIIVENTRIS*, Gould.

One of our collectors obtained a single female specimen of this Trogon near Choctum, in the low forest-region of Vera Paz.

36. *TROGON ELEGANS*, Gould.

Though we never met with this species, it must be included. being mentioned as coming from Guatemala by both Gould and Cabanis (*Mus. Hein.*). We possess specimens both from Mexico and Nicaragua.

37. *NYCTIBIUS JAMAICENSIS* (Gm.).

Though never actually observed by either of us, this species, no doubt, is found in the country, as Don Vicente Constancia

obtained two specimens, one of which is now in our possession, near the city of Guatemala.

38. *ANTROSTOMUS CAROLINENSIS* (Gm.).

One female specimen only was obtained at Dueñas.

39. *PANYPTILA SANCTI-HIERONYMI*, Salv. P. Z. S. 1863, p. 190, pl. 23.

No additional specimens have been received by us since the two mentioned above were obtained, though I have made every endeavour to procure more. Unless a rock to which the species resorts to roost were found, it is not likely that any birds will be shot, as their rapidity of flight is greater than that of any Swift I ever saw.

40. *PYRRHOPHÆNA CERVINIVENTRIS*, Gould, Mon. Troch. v. pl. 309.

I obtained three specimens of this species near the village of Santana, Peten. They were feeding in company with the common species, *P. riefferi* (Bourc.), and *Lampornis prevosti* Bourc. et Muls.

41. *PYRRHOPHÆNA CYANURA*, Gould, Mon. Troch. v. pl. 315.

Originally described from specimens procured near Realejo, Nicaragua. I found it tolerably numerous near the villages of Retáluleu and Masatenango, in the district of Guatemala called the "Costa grande." It would appear to be restricted in its range to the Pacific side of the Cordillera.

42. *CHRYSOTIS LEVAILLANTI*, Gray.

Belize and Yucatan.

43. *SCOPS*, sp.

We have at least one Owl of this form to be added to the list of Guatemala birds ; but, as the whole group must shortly undergo revision, I leave its determination for the present.

44. *CICCABA NIGROLINEATA*, ScL. Trans. Z. S. vol. iv. p. 269, pl. 63.

Two fine specimens of this Owl were given me by Dr. Ber-

nouli. They were shot near Masatenango, in the Costa Grande of the Pacific side.

45. *BRACHYOTUS CASSINI*, Brewer.

A few days before leaving Guatemala, some Indians brought two specimens of the American Short-eared Owl. They said they had shot them amongst some long grass (*pajal*) on the slope of the Volcan de Agua.

46. *MYCTERIA AMERICANA* (Linn.).

I believe this magnificent Stork occurs nowhere but in the neighbourhood of the half-dry, brackish lakes of Huamuchal. It is not common, and is only occasionally met with. I obtained but two specimens (*vide* Ibis, 1865, p. 197).

47. *DEMIEGRETTA LUDOVICIANA* (Wils.): Baird, Birds N. A. p. 663; Salv. Ibis, 1865, p. 192.

Louisiana Herons are common about the lagoons that line the whole Pacific coast of Guatemala. I never observed the species far inland.

48. *DEMIEGRETTA PEALII* (Bp.): Baird, Birds N. A. p. 661; Salv. Ibis, 1865, p. 192.

This species is generally, but not commonly, met with on the muddy flats surrounding the salt pools of Chiapam.

49. *DEMIEGRETTA RUFA* (Bodd.): Baird, Birds N. A. p. 662.

This Heron is found in the same localities as the preceding species, but is certainly more abundant.

50. *BOTAURUS LENTIGINOSUS* (Mont.)

Dueñas and Coban.

51. *ARDETTA EXILIS* (Gm.).

Dueñas and Coban.

52. *SQUATAROLA HELVETICA* (Linn.): Baird, Birds N. A. p. 697; Salv., Ibis, 1865, p. 190.

This almost universally distributed species occurs on the sandy flats of Chiapam, and is usually seen in company with the flocks of *Tringa*, and the like.

53. *ÆGIALITES NIVOSUS*, Cassin?: Baird, Birds N. A. p. 696.

We possess a single specimen of a Ring-Plover collected by

Arcé at Chiapam in September 1862, which agrees fairly well with Mr. Cassin's description of *Æ. nivosus*, as quoted above. It has, however, a narrow black pectoral band, which he conjectures is present in the adult of his species, and is, as far as I can judge from the skin, somewhat smaller in its measurements, except the wings, which are slightly, and the tail, which is much longer. I feel doubtful if it really does belong to this species, as our specimen differs very little from the South American *Æ. collaris*, Vieill. (*Æ. azaræ*, auct.), and certainly does not confirm Mr. Cassin's remark respecting the distinction of the *Æ. nivosus* from *Æ. collaris*:—"It is quite distinct from that [i. e. *Æ. azaræ*] or any other that has come under my notice." Our specimen differs from the South American bird in the absence of the rufous on the sides of the neck and above and below the ends of the pectoral band; for this reason I place it under the name of *Æ. nivosus*. Its measurements are precisely those of *Æ. collaris*, of which I possess two specimens—one from Mendoza, through Prof. Burmeister, and the other from Marambaya in Brazil, collected by Natterer. Long. tot. 6, alæ 3·85, caudæ 2, tarsi 1·05, rostri à rictu ·75 poll. Britt.

✓ 54. *ÆGIALITES SEMIPALMATUS* (Bp.): Baird, Birds N. A. p. 694; Salv. Ibis, 1865, p. 191.

Sandy flats of Chiapam.

✓ 55. *ÆGIALITES WILSONIANUS* (Ord): Baird, Birds N. A. p. 693; Salv. Ibis, 1864, p. 387, et 1865, p. 191.

Found in flocks with the last-mentioned species. Very common. It occurs also and remains to breed on the Cays of the Belize coast.

✓ 56. *NUMENIUS HUDSONICUS*, Lath.: Baird, Birds of N. A. p. 744; Salv. Ibis, 1865, p. 190.

Very abundant about the lagoons of Chiapam.

57. *NUMENIUS LONGIROSTRIS*, Wils.: Baird, Birds of N. A. p. 743.

Not nearly so common as the last species, but found in the same localities. We also have a specimen which was shot near Dueñas.

58. *SYMPHEMIA SEMIPALMATA* (Gm.).

Common at Chiapam and the lagoons of the Pacific coast.

59. *PHALAROPUS WILSONI* (Sab.).

From a lake near Guatemala (*Constancia*).

60. *RECURVIROSTRA AMERICANA*, Gm.: Baird, Birds N. A. p. 703. *R. occidentalis*, Vigors, Zool. Journ. 1829, p. 356; Salv. Ibis, 1865, p. 193.

All the Avocetts I saw were in the plumage described by Vigors as *R. occidentalis*. They are common at Chiapam and about the neighbouring lagoons.

61. *STREPSILAS INTERPRES* (Linn.): Baird, Birds of N. A. p. 701.

Occurs on both coasts of Guatemala.

62. *ORTYGOMETRA JAMAICENSIS* (Gmel.).

A single specimen, agreeing in all respects with examples from Jamaica, was shot by Mr. Fraser near the lake of Dueñas.

63. *GALLINULA GALEATA* (Licht.).

Lake of Dueñas: not common.

64. *ÆTHYIA VALISNERIA* (Wils.): Baird, Birds of N. A. p. 794.

We obtained a single immature male of this species from the lake of Dueñas.

65. *LARUS HEERMANNI*, Cass.: Baird, Birds N. A. p. 848; Coues, Ibis, 1864, p. 388; Salv. Ibis, 1865, p. 190.

Young immature birds only were obtained on the Pacific coast. They were usually found along the shore, and not in the lagoons.

66. *CHROICOCEPHALUS CUCULLATUS*, Licht.: Baird, Birds N. A. p. 851; Coues, Ibis, 1864, p. 388.

Usually observed a short way out at sea on the Pacific coast.

67. *THALASSEUS ACUFLAVIDUS*, Cabot: Coues, Ibis, 1864, p. 389; Salv. *ibid.* pp. 381 & 386, et 1865, p. 190.

A very common species on both coasts.

68. *THALASSEUS ELEGANS*, Gambel: Coues, Ibis, 1864, p. 389.

The only specimen of this bird which came under our notice

was shot in the Bay of Fonseca by Capt. J. M. Dow, who kindly presented it to me.

- ✓ 69. *THALASSEUS REGIUS*, Gambel : Baird, Birds N. A. p. 859 ;
Coues, Ibis, 1864, p. 388 ; Salv. *ibid.* p. 385, et 1865, p. 190. ✓
Also abundant on both coasts.

70. *GELOCHELIDON ANGLICA* (Mont.) : Coues, Ibis, 1864,
p. 389, et 1865, p. 190. ✓
Common at Chiapam.

- ✓ 71. *STERNA PARADISEA*, Brünn. : Coues, Ibis, 1864, p. 389 ;
Salv. *ibid.* p. 387. ✓

I observed only three or four of this species on Grassy Cay, Turneff. They were, I believe, preparing to breed on that island, which was also tenanted by great numbers of *S. antillarum*.

72. *STERNA FORSTERI*, Nutt. : Coues, Ibis, 1864, p. 390. ✓
The only Tern I ever saw on the lake of Dueñas.

- ✓ 73. *STERNA ANTILLARUM*, Less. : Salv. Ibis, 1864, pp. 384
& 387 ; Coues, Ibis, 1864, p. 390. ✓

Mr. E. Bartlett has lately sent home a specimen of a *Sterna*, which I have no doubt is the *S. superciliaris*, Vieill. The differences between this bird and *S. antillarum* are ably stated by Dr. Coues as above quoted, and apply equally to the Bogotan specimen he had before him and to Mr. Bartlett's from the Upper Amazons.

74. *HALIPLANA PANAYENSIS* (Gm.) : Salvin, Ibis, 1864, ✓
pp. 381 & 385. *Sterna panaya*, Lath. Ind. Orn. ii. p. 808. *Hali-*
plana discolor, Coues, Ibis, 1864, p. 392 ; Lawr. Ann. Lyc. N. Y. ✓
viii. p. 105.

I cannot agree with Mr. Lawrence in justifying Dr. Coues's re-description of this bird under a new specific name. Gmelin's remark, "*cervix ex cinerascenti nigra*," I think at once shows that the bird he was describing certainly was not *H. fuliginosa*, with which both he and Latham were well acquainted. This character is, on the contrary, applicable to the present species, and is also noticed by Latham (Gen. Hist. vol. x. p. 119), where he

says, "hind part of the neck greyish black." The top of the head is described as being spotted with black, indicating immaturity. A specimen before me has a single white feather on the crown. Such being the case, I cannot avoid concluding that the description of *Sterna panayensis* fits this well-known species better than its congener, and that the name now under discussion had best be left as most modern ornithologists have identified it.

The species is common about the Cays of the Belize coast.

75. *HALIPLANA FULIGINOSA* (Gm.) : Salv. Ibis, 1864, p. 385. ✓

I only met with a few solitary birds of this species about the Cays of the Belize coast. It is said to be much more abundant and to breed in large numbers at Cape Gracias a Dios.

76. *ANOUS TENUIROSTRIS*, Temm. : Salv. Ibis, 1864, p. 383 ; Coues, *ibid.* p. 393. ✓

Abundant on one small Cay (South-West of All Cay) on the outer margin of Glover's Reef.

77. *RHYNCHOPS NIGRA*, L. : Salv. Ibis, 1865, p. 193. ✓

Lagoon of Acapam, on the Pacific coast.

78. *PHALACROCORAX FLORIDANUS*, Aud. : Salv., Ibis, 1864, p. 374. ✓

Man-of-War Cay, Belize coast. We possess one other species of *Phalacrocorax* besides *P. mexicanus*, which we have not yet been able to identify, as the specimens are immature.

79. *SULA PISCATOR* (L.) : Salv. Ibis, 1864, p. 379. ✓

Half-moon Cay on the Belize coast, where numbers resort to breed.

80. *PODICEPS CALIFORNICUS*, Heerm.

Common on the lake of Dueñas, in immature and winter plumage. One specimen in summer dress was shot near Cubulco, in Vera Paz, and brought to us.

81. *PODILYMBUS*, sp.

A second species of this form occurs on the lake of Atitlan. I have not yet determined it.

Corrections to the former Papers on the Ornithology of Central America.

In our introductory remarks (Ibis, 1859, p. 4) we somewhat prematurely stated that the part of Central America of which we were speaking embraced three distinct regions—the Atlantic coast-region, the Central region or tablelands, and the Pacific coast-region, and that the two coast-faunas were quite distinct, the same species seldom occurring in both. In order to show how this view must be modified, and in a great measure altered, I will briefly state how the 612 birds are distributed, and how much peculiarity is possessed by each division. As the central country is deeply cut by valleys—those of the Motagua and some of the southern branches of the Rio Chisoy or Negro, such as the river of San Gerónimo—all of which open out into plains of considerable extent, viz. those of Zacapa (1200 feet above the sea), Salama (3000 feet), Rabinal, Cubulco, and so on, the vegetation of which consists of open grassy savannas broken by patches of *Mimosæ* and *Cacti*, I shall begin by considering this a separate district, and also the highland (peninsula of cold country I may call it) district of Alta Vera Paz. 189 species were observed in the Pacific coast-region, 280 in the tablelands of the Cordillera, *i. e.* at 4000 feet of elevation and upwards, 132 in the central plains and valleys, 214 in Alta Vera Paz, and 309 in the Atlantic coast-region. 31 of the Pacific coast-region birds were observed only there; the number of species peculiar to each of the other districts were observed to be 63 in the tablelands, 11 in the central plains, 26 in Alta Vera Paz, and 149 in the Atlantic coast-region. Most of the remaining species of the Pacific coast-region belong also to that of the Atlantic, and only a few to the tablelands. The tablelands and Alta Vera Paz have more species in common than either has with any lowland region, and the central plains and valleys belong rather to the *terra caliente* than to the upland districts.

After deducting from the number of species apparently peculiar to each region such as are really of much wider range, we find but little, except perhaps poverty of species, to separate the Pacific coast-region and the central plains and valleys from the

Atlantic coast-region; and in the same way, though hardly to the same extent, Alta Vera Paz merges into the highlands of the Cordillera. Hence we see that altitude and consequent decrease of temperature is the primary cause for separating the ornithic life of Guatemala into two principal divisions. The minor divisions are chiefly the result of different causes, and depend on vegetation and consequent abundance or scarcity of food. Again referring to the Pacific coast-region, it is worthy of remark that only two or three peculiar species are found representing other closely allied species on the Atlantic side, and that the difference is most strongly shown by the absence of many genera common in the corresponding eastern region. To show clearly how these results have been arrived at, it would be necessary to compare the numbers in some tabular form; but as this would enlarge the subject beyond my present intention, which is simply to correct errors, I leave it for another opportunity.

- × 1859, p. 5. *Turdus grayii*, Bp. Not confined to districts of upwards of 4000 feet of elevation, but found throughout the lowlands and as far southward as Panama.
- „ p. 7. *Mimus gracilis*, Cab. Very rare on the tablelands, and, as far as I am aware, never occurs on the Pacific side.
- „ p. 8. *Campylorhynchus capistratus*, nobis nec Less. Belize specimens probably belong to *C. rufinucha* (vide *suprà*). The true *C. capistratus* is common on the Pacific side.
- „ p. 9. *Troglodytes aedon*, nobis (nec Vieill.) = *T. intermedius*, Cab., *T. hypaedon*, Scl.
- „ p. 9. *Polioptila mexicana* (Bp.). Now considered by Dr. Baird to be identical with the northern *P. carulea* (L.). (See Rev. Am. B. part i. p. 74.)
- „ p. 12. *Icteria velasquezi*, Bp. Now considered the same as *I. virens*, L. (See Baird, Rev. Am. B. part i. p. 228.)
- „ p. 12. *Vireosylvia philadelphica*, nobis (nec Cassin) = *V. cobanensis*, Scl. P. Z. S. 1860, p. 463.

X 1859, p. 13. *Progne dominicensis*, nobis (nec Gm.) = *P. leucogastra*, Baird, Rev. Am. B. part i. p. 280.

The males, as far as my observations go, never have the glossy steel-blue of the back on the throat and chest, thus differing from the true *P. dominicensis* of the Antilles.

„ p. 14. *Chlorophanes atricapilla*, nobis, ? = *C. guatemalensis*, Scl. The difference is very slight.

„ p. 19. *Sturnella hippocrepis*, Wagl. (?)

I agree with Cabanis in uniting all the numerous species of *Sturnella* of this form under the old name of *S. ludoviciana*. I am quite at a loss to detect the characters by which they are said to be distinguishable.

„ p. 20. *Icterus affinis*, Lawr. = *I. spurius*, L.

✓ „ p. 119. *Thamnophilus melanurus*, nobis (nec Gould) = *T. melanocrissus*, Scl. P. Z. S. 1860, p. 252.

✓ „ p. 122. *Contopus borealis*, nobis (nec Sw.) = *C. pertinax*, Cab. et Hein.: Scl. Cat. p. 231.

✓ „ p. 122. *Contopus mesoleucus*, Scl. = *Tyrannus borealis*, Sw.: Scl. Cat. p. 230.

✓ „ p. 122. *Contopus sordidulus*, Scl. = *Tyrannula richardsoni*, Sw. F. B.-Am.: Scl. Cat. p. 231.

✓ „ p. 124. *Lipaugus rufescens*, Scl. Probably from Panama. We never met with the species in Guatemala. At Panama it does occur.

✓ „ p. 124. *Chiroxiphia linearis* (Bp.). Never from Vera Paz; the species is peculiar to the Pacific coast-region. The supposed specimens from Vera Paz came through Don Vicente Constancia, whose information respecting localities I have sometimes found incorrect.

✓ „ p. 125. *Nyctidromus americanus* (Linn.) ? = *N. guianensis*, Gm. Probably the only species of the form. The true *Caprimulgus americanus*, L., founded on *C. jamaicensis*, Briss., is the *Siphonorhis americanus*, Scl. (see Cat. Am. Birds, p. 282).

- ✓ 1859, p. 126. *Phaethornis cephalus*, (Bourc. et Muls.) = *P. longirostris* (Delatt.), Gould, Introd. Troch. p. 42.
- ✓ „ p. 127. *Campylopterus delattrii* (Less.) = *Trochilus hemileucurus*, Licht.: Gould, Introd. Troch. p. 52.
- ✓ „ p. 127. *Cyanomyia cyanocephala*, nobis (nec Less.) = *C. guatemalensis*, Gould, Introd. Troch. p. 148.
- ✓ „ p. 130. *Amazillia corallirostris* (Bourc. et Muls.) = *Ornismya cinnamomea*, Less.: *Pyrrhophæna cinnamomea*, Gould, Introd. Troch. p. 156.
- ✓ „ p. 130. *Amazillia arsinoe*, nobis (nec Less.) = *Troch. devillii*, Bourc.: *Pyrrhophæna devillii*, Gould, Introd. Troch. p. 158.
- ✓ „ p. 130. *Chlorostilbon caniveti* (Less.) = *Chlorolampis osberti*, Gould, Introd. Troch. p. 174.
- ✓ „ p. 131. *Ceryle americana*, nobis (nec Gm.) = *C. cabanisi*, Tsch.: Scl. Cat. p. 264.
- ✓ „ p. 132. *Trogon citreolus*, Gould. Specimens of this Trogon, which we never met with ourselves, are in the Berlin Museum. They were collected by Deppe at Tequistlan and Tehuantepeque (Cab. Mus. Hein. iv. p. 198).
- ✓ „ p. 133. *Piaya mexicana*, nobis (nec Sw.). I never obtained the true *P. mexicana*. The Guatemalan species should, I believe, be called *P. mehleri*, Bp.
- ✓ „ p. 136. *Campephilus imperialis* (Gould)? This species must be erased from the list, as we never met with it; and probably my informant described *C. guatemalensis*, which is occasionally seen in the forests of the Volcan de Fuego.
- ✓ „ p. 216. *Urubitinga* ——? Appears to be the young of *Asturina nitida* (Lath.).
- ✓ „ p. 221. *Scops* ——? Probably the same as *S. choliba*, Vieill. (*Strix brasiliensis*, Temm.; *S. crucigera*, Spix), from Brazil.
- ✓ „ p. 226. *Tinamus major*, Gm.? = *T. robustus*, Scl.

- ✓ 1859, p. 226. *Tigrisoma tigrinum*, nobis (nec Gm.), is the northern form, *T. cabanisi*.
- ✓ „ p. 227. *Eurypyga helias*, nobis (nec Pall.) = *E. major*, Hartl.
- ✓ „ p. 228. *Gallinago* — ? Nothing more than *G. wilsoni* of North America.
- ✓ „ p. 234. *Podiceps* — ? = *P. dominicensis*.
- ✓ 1860, p. 35. *Glyphorhynchus cuneatus* (Max.) ? = *G. pectoralis*, Scl. & Salv. P. Z. S. 1860, p. 299. *G. major*, Scl. Cat. p. 161.
- ✓ „ p. 37. *Chætura* — ? = *C. vauxi*, Baird.
- ✓ „ p. 273. *Dendræca* — ? = *D. canadensis* ♀ (see Baird's Birds N. A. p. 271).
- ✓ „ p. 274. *Chamæospiza torquata*, nobis (nec Scl. nec DuBus).
 The specimen obtained by me, and identified as above, was quite immature. I subsequently procured adult specimens. On seeing the type of *Pyrgisoma leucote*, Cab., in the Berlin Museum, my surprise was great on recognizing our Guatemalan bird. The true *C. torquata* (DuBus) is not found in Guatemala at all; and the bird we mistook for it (never having reexamined the adult) is *Pyrgisoma leucote*.
 1874 315 1878 446
- ✓ „ p. 276. *Heliomaster longirostris* = *H. pallidiceps*, Gould, Int. Troch. p. 139.
- ✓ „ p. 278. *Sterna frenata*, Gambel. The specimen thus identified is in reality the immature of *Hydrochelidon fissipes*. *Sterna antillarum*, the Lesser Tern of the Antilles, does occur on the Belize coast (Ibis, 1864, p. 387).
- ✓ „ p. 397. *Thryothorus felix*, nob. (nec Scl.). Additional specimens have proved the bird referred with doubt to *T. felix*, a Mexican species, to be the Wren described by Cabanis from Costa Rica as *T. modestus*. The species occurs as far south as the isthmus of Panama (see P. Z. S. 1864, p. 346). It occurs both on the Pacific coast of Guatemala and near Coban,

where we obtained specimens, and whence others have lately been transmitted to the Paris Museum by M. Bocourt, the naturalist of the French Exploring Expedition.

- ✓ 1860, p. 397. *Parula brasiliana*, nobis (nec Licht.) = *P. inornata*, Baird, Rev. Am. Birds, pt. i. p. 171.
- 1867
43 ✓ „ p. 398. *Coccothraustes maculipennis*, Scl. = *C. abeillii*, Less. ♀.
- ✓ „ p. 400. *Chloronerpes oleagineus*, nobis (nec Reich.) = *C. caboti*, Malh. : Scl. Cat. p. 337.
- ✓ „ p. 402. *Columba* — ? = *C. nigrirostris*, Scl. P. Z. S. 1859, p. 390.
- ✓ „ p. 402. *Eudocimus ruber* (L.). Must be erased from the list.
- ✓ 1861, p. 356. *Tinamus sallæi*, Bp. Chisec is an erroneous locality; I only obtained *T. sallæi* from the Pacific side of the Cordillera; it is probably the same as *T. cinnamomeus*, Less., and *T. delatirii*, Bp.

XIX.—Notices of Recent Ornithological Publications.

1. ENGLISH.

It is perhaps only to be expected that in these days of examination epidemic the feathered tribes should come in for their share of the prevailing discipline. Mr. C. O. Groom Napier has constituted himself an examiner of the British Birds, and records the results of his inquiries in a little treatise*, giving marks of approval or the contrary to each species. As the book may interest some who profess to be ornithologists, and is, we believe, the author's maiden effort, we desire to speak of it with all forbearance; but we must take leave to say that we do not

* The Food, Use, and Beauty of British Birds. An Essay, accompanied by a Catalogue of all the British Birds, with notices of their Food, the result of many hundred examinations of their stomachs, during seven years. Their geographical distribution and æsthetic value. By CHARLES OTTLEY GROOM NAPIER. London: (Groombridge) 1865. 8vo, pp. 88.